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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,270	03/12/2004	Chang-yeob Choo	1793.1168	5868
21171 7590 07/24/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER GIESY, ADAM	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 07/24/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/798,270

Applicant(s)

CHOO ET AL.

Examiner

Adam R. Giesy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (hereinafter Choi – 7,092,334 B2) in view of Koudo et al. (hereinafter Koudo – US Pat. No. 5,956,307).

Claims 1-36 are rejected for the same reasons as discussed in the previous Office Action mailed on 2/22/2007 (see Response to Arguments).

Regarding claim 37, Choi and Koudo disclose all of the limitations of claim 2 as discussed in the claim 2 rejection in the previous Office Action. Choi further discloses determining whether the data recording error occurs while the optical disc is rotated at the constant angular velocity that is lower than the adjusted constant angular velocity (see Figure 2, elements S50-S52).

Koudo discloses that if the data recording error is determined to exist, rotating the optical disk at a constant linear velocity that is lower than the constant angular velocity that is lower than the adjusted constant angular velocity, and recording the data on the optical disc (see abstract and column 32, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the recording method as disclosed by Choi with the

rotation speed regulation method as disclosed by Koudo, the motivation being to reduce power consumption, regulate heat generation, and reduce a the recording error rate.

Regarding claim 38, Choi and Koudo disclose all of the limitations of claim 10 as discussed in the claim 10 rejection in the previous Office Action. Choi further discloses determining whether the data recording error occurs while the optical disc is rotated at the constant angular velocity that is lower than the adjusted constant angular velocity (see Figure 2, elements S50-S52).

Koudo discloses that if the data recording error is determined to exist, rotating the optical disk at a constant linear velocity that is lower than the constant angular velocity that is lower than the adjusted constant angular velocity, and recording the data on the optical disc (see abstract and column 32, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the recording method as disclosed by Choi with the rotation speed regulation method as disclosed by Koudo, the motivation being to reduce power consumption, regulate heat generation, and reduce a the recording error rate.

Regarding claim 39, Choi and Koudo disclose all of the limitations of claim 20 as discussed in the claim 20 rejection in the previous Office Action. Choi further discloses that if it is determined that the data recording error has occurred when the constant angular velocity is two steps lower than the predetermined constant angular velocity (see Figure 2, elements S50-S52).

Koudo discloses that the controller controls the motor driver to rotate the optical disc at a constant linear velocity that is lower than the two steps lower constant angular velocity (see abstract and column 32, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the recording method as disclosed by Choi with the rotation speed regulation method as disclosed by Koudo, the motivation being to reduce power consumption, regulate heat generation, and reduce a the recording error rate.

Regarding claim 40, Choi and Koudo disclose all of the limitations of claim 28 as discussed in the claim 28 rejection in the previous Office Action. Choi further discloses that if it is determined that the data recording error has occurred when the constant angular velocity is two steps lower than the predetermined constant angular velocity (see Figure 2, elements S50-S52).

Koudo discloses that the controller controls the motor driver to rotate the optical disc at a constant linear velocity that is lower than the two steps lower constant angular velocity (see abstract and column 32, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the recording method as disclosed by Choi with the rotation speed regulation method as disclosed by Koudo, the motivation being to reduce power consumption, regulate heat generation, and reduce a the recording error rate.

Response to Arguments

3. Applicant's arguments filed 4/24/2007 have been fully considered but they are not persuasive.

Applicants argue, on pages 10-12 of the Response mailed on 4/24/2007, that Koudo does not disclose the circumstances for adjusting the recording speed. Examiner respectfully disagrees. Examiner points to the abstract of Koudo which states that a phase error signal is fed to the spindle motor to regulate the speed in CLV mode. Examiner also argues that the combination of Choi and Koudo is valid since Choi clearly discloses altering the rotation speed of a disc based on signal error and Koudo discloses both CAV and CLV rotation and the switching between CLV and CAV in order to conserve power and regulate heat generation.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on (571) 272-7582. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 7/20/2007



THANG V. TRAN
PRIMARY EXAMINER